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THE REVISED SAFETY SYSTEM - A COMPUTER SOFTWARE PACKAGE ON ACCIDENT REPORTS AND RELATED INFORMATION

Report No 87-72-K

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ABSTRACT

A computer software package was written for the Construction Group at the Pickering NGS. The package generates reports on the accidents incurred on the job, and the medical history of each employee. This report includes a brief summary of the software package, a User's Guide, and a Programmer's Guide.

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To DR. D. MILLS
Director of Research

THE REVISED SAFETY SYSTEM - A COMPUTER SOFTWARE PACKAGE ON ACCIDENT REPORTS AND RELATED INFORMATION

The Construction Group at the Pickering NGS required a computer software package that would generate reports on accidents incurred on the job, and reports on the medical history of each employee. A first version of the Safety System software package was described in Research Division Report 86-330-K. Recently, a revision of this package was requested, to remove the ability to generate reports on safety-related training. A separate computer software package was written, and named the Training System. This package generates the training reports previously produced by the Safety System. A future Research Division report will describe the Training System.

This report is on the revised Safety System package. It contains two Appendices. The first, Appendix A (p A-1) is a Users' Guide, and contains instructions on how to use the system. The second, Appendix B (p B-1), is a Programmers' Guide, and contains information needed if modifications to the system are desired.

Any questions regarding the use of the revised Safety System software package should be directed to the Construction Group at the Pickering NGS or the Operations Research Department.

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87-72

APPENDIX A

A USER'S GUIDE OF THE REVISED SAFETY SYSTEM SOFTWARE PACKAGE

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1. OVERVIEW OF THE REVISED SAFETY SYSTEM SOFTWARE PACKAGE

The Revised Safety System, designed for the Construction Group at the Pickering NGS, is composed of three main functions. These functions are:

(1) the Accident Report Generation function,
(2) the Medical Report Generation function,
(3) the Update Data function.

The Accident Report Generation function contains seven different reports which may be generated. The Medical Report Generation function contains one report which may be generated. Each of these reports requires information from the user, which is supplied by completing one or more menus. The concept of a menu will be explained in Section 3. The reports may be printed on the terminal screen or sent to the line printer.

The Update Data function is broken down into two sub-functions. Each sub-function updates a different type of data. These types of data are:

(1) the general information needed for each employee. For example, name, SIN number, home address, etc. Table 1 of Appendix A.1 contains a complete list;

(2) the information needed for each reported accident. For example, date of accident, location of accident, class of injury, etc. Table 2 of Appendix A.1 contains a complete list.

For each of the two sub-functions of the update data function, three tasks may be performed. These tasks are:

(1) the addition of data,
(2) the deletion of data, and
(3) the modification of data.

2. A DESCRIPTION OF EACH REPORT

This section contains a brief description of the different reports that can be generated using the Revised Safety System.

2.1 Accident Reports

There are seven different reports that can be generated on the recorded accidents. They are numbered 1 to 7.

Accident Report #1

This report is called the "Monthly Statistics" report, and is broken down into five parts. The first part contains the Lost Time Injury (LTI) targets for severities and frequencies. The second part contains a summary of Medical Attention (MA) received for the month and for the year to date. The third part contains a list of serious or potentially serious accidents that have occurred for the year to date. The fourth part contains a summary for all LTI's. The fifth part contains a list of workers still on compensation. The user decides which group of employees are to be included in the report, and which date is to be used as the break off point.

Accident Report #2

This report is called "Accidents for A Given Month", and it contains a sum of the number of first aids, MA's, "A" type LTI's, and all LTI's, for each sub-group of the group of employees chosen. This report will use only the accidents from the month chosen.

Accident Report #3

This report is called the "Weekly Summary of MA's and LTI's", and it contains a list of all MA's or LTI's which have been sent to the Worker's Compensation Board in the week chosen. It will be sorted in such a way that all MA's appear together and all LTI's appear together.

Accident Report #4

This report is called "Outstanding Lost Time Injuries", and it contains a list of all employees that have not returned to work following an LTI. The user decides which group of employees are to be checked, and which date is to be used, to be considered as still on compensation.

Accident Report #5

This report is called "Summary of MA's and LTI's," and it contains a list of all MA's and LTI's which have been recorded for the year to date. The user decides which group of employees are to be included and the report will be sorted in such a way that all MA's appear together and all LTI's appear together.

Accident Report #6

This report is called "Accident Summary by Category," and it contains a sum of First Aids, MA's, and LTI's for each sub-group of the group of employees chosen, and for each category of accidents. This report will use only the accidents from the year chosen.

Accident Report #7

This report is called the "K.R.A. Report," and it contains the fatalities, the severity of LTI's, the frequency of LTI's, and the frequency of 'A' type LTI's, for the month chosen, the previous months, and the target. The user decides which group of employees are to be used, and which month will be considered the present month.

2.2 Medical Reports

There is only one medical report and it has been numbered 1.

Medical Report #1

This report is called "Medical History of Employee," and it contains for any given employee, the date of last blood work, the date of last ARW (Atomic Radiation Worker) medical, and the date of last non-ARW medical.

3. EXECUTING THE REVISED SAFETY SYSTEM

The Safety System can be completely executed by what is known as menus. A menu is simply a computer screen with one or more questions, which must be answered by the user. The answers are placed in the highlighted boxes on the screen, and are used to determine the next step to be taken by the system.

The menus in the Safety System are organized in a tree structure. This means there is one main or root menu which branches into two or more other menus. These other menus may in turn branch further into two or more menus, and so on. In the Safety System the main menu branches into three menus, one for each of the three main functions of the system. Figure 1 is a flow diagram of the main menu and its three branches. Notice that the arrows go in both directions. This means that the user may go from the main menu, to the Update Data menu, and then back to the main menu, without exiting from the system.

The Accident Reports menu branches into seven menus, one for each of the seven different accident reports that can be generated. Figure 2 is a flow diagram of the Accident Report's menu and its eight branches. Notice again that the arrows go in both directions.

The Medical Reports menu branches into only one menu, since the safety system has only one medical report that can be generated. Figure 3 is a flow diagram of the Medical Reports menu and its only branch.

The Update Data menu branches into two menus, one for each of the two different types of data stored in the safety system. Figure 4 is a flow diagram of the Update Data menu and its four branches.

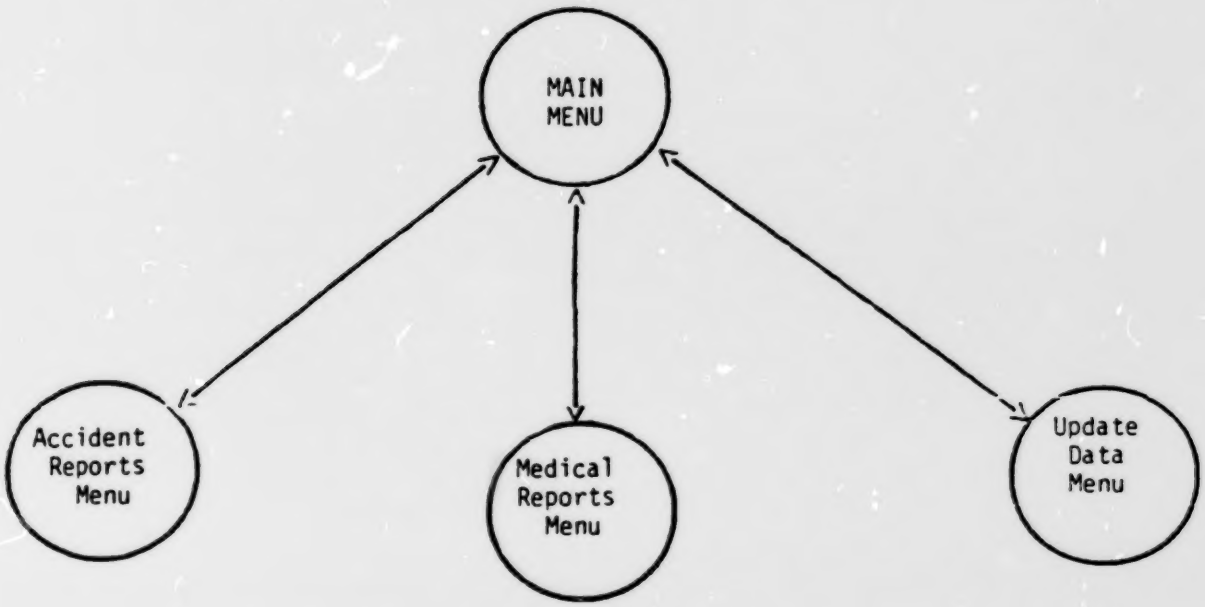

Figure 1

A Flow Diagram of the Main Menu
and Its Three Branches

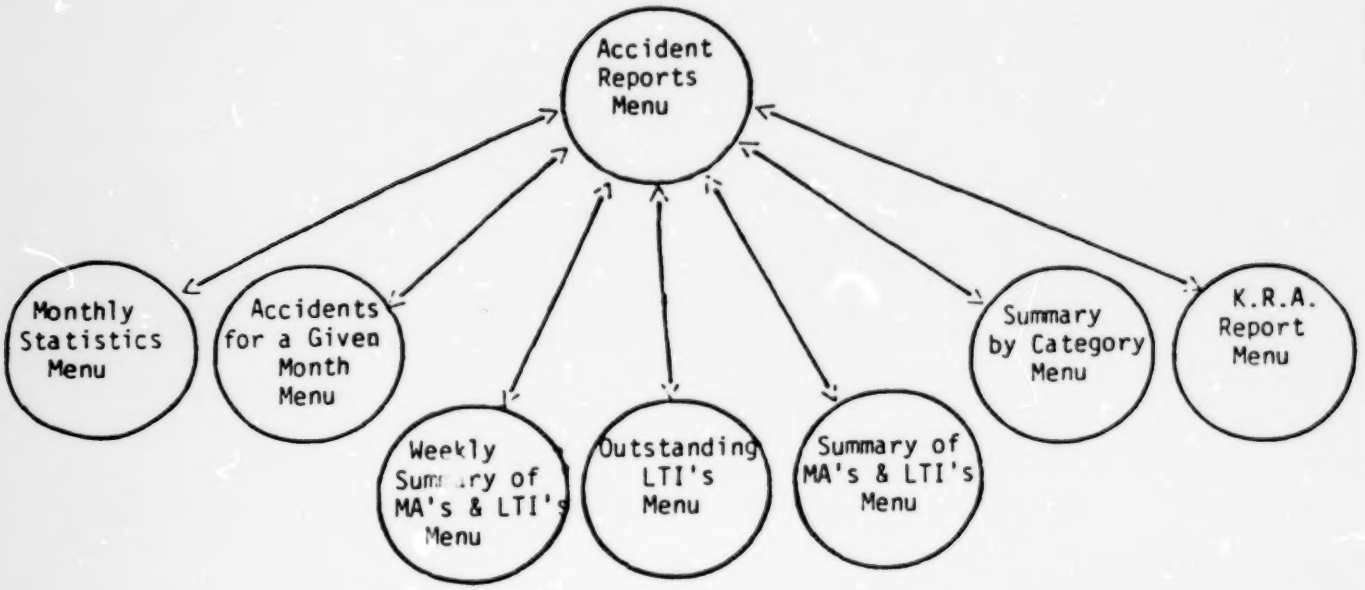
Accident Reports Menu
Monthly Statistics Menu
Accidents for a Given Month Menu
Weekly Summary of MA's & LTI's Menu
Outstanding LTI's Menu
Summary of MA's & LTI's Menu
Summary by Category Menu
K.R.A. Report Menu

Figure 2

A Flow Diagram of the Accident Reports Menu and its Seven Branches

Figure 3

A Flow Diagram of the Medical Reports
Menu and Its One Branch

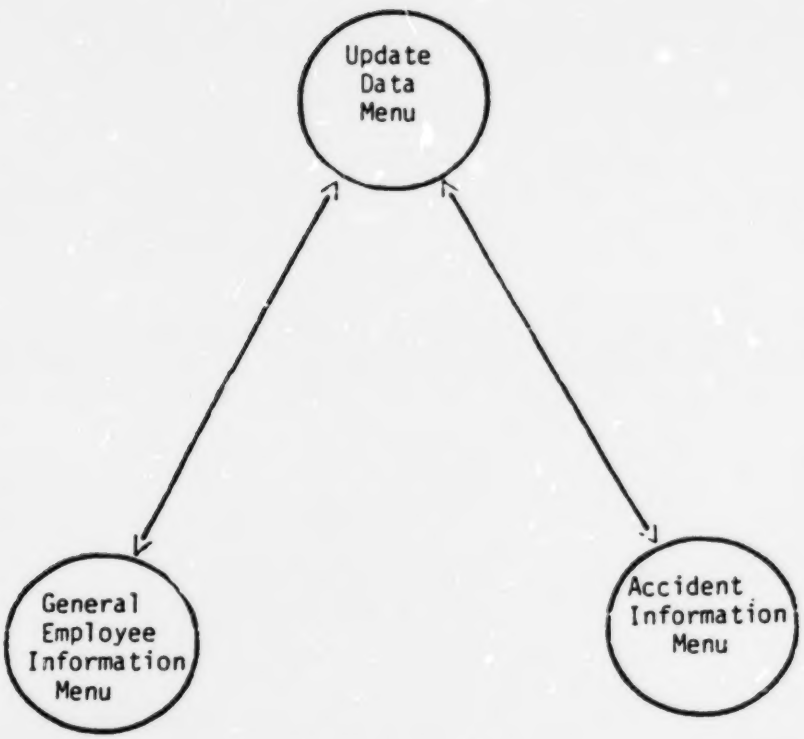

Figure 4

A Flow Diagram of the Update Data Menu
and Its Two Branches

When executing the Safety System, the user can move from one menu to the next, depending on which functions are desired. Once these functions are completed, the user must return to the main menu for the proper exiting procedure. If this is not followed, the system may not execute properly the next time.

4. HOW TO FILL IN THE MENUS

This section will help to answer all the questions found on the different menus, using step-by-step instructions.

4.1 Main Menu

The main menu allows the user to choose one of the four functions of the Safety System. The menu appears as follows.

SAFETY SYSTEM

1> ACCIDENT REPORTS
2> MEDICAL REPORTS
3> UPDATE DATA BASE FILES
9> EXIT

Enter (1 - 9): __

The user must enter a number between 1 and 9. If number 1, 2, or 3, is entered, the corresponding function is started. If number 4, 5, 6, 7, or 8, is entered, nothing will happen. If number 9 is entered, the Safety System terminates.

4.2 Accident Reports Menu

If number one was entered on the Main menu, it will then be replaced by the following menu.

ACCIDENT REPORTS

1> MONTHLY STATISTICS
2> ACCIDENTS FOR A GIVEN MONTH
3> WEEKLY SUMMARY OF MA's & LTI's
4> OUTSTANDING LOST TIME INJURIES
5> SUMMARY OF MA's & LTI's
6> ACCIDENT SUMMARY BY CATEGORY
7> K.R.A. REPORT
9> EXIT

Enter (1 - 9): __

The user must enter a number between 1 and 9. If number 1,2,3,4, 5,6,or 7, is entered, the corresponding report is started. If number 8 is entered, nothing will happen. If number 9 is entered, the Safety System returns to the Main menu.

Monthly Statistics Report Menu

If number one was entered on the Accident Reports menu, it will then be replaced by the following menu.

Choose Number that Matches
Group Wanted 0

1 PICKERING G.S. 'B' CONSTRUCTION
2 LINES & STATIONS & MISC. PROJ.
3 ADMINISTRATION & SERVICES
4 CONTRACTOR
5 ALL GROUPS

Enter Date of Last Day of Month Wanted 01/01/01 **MM/DD/YY**

Send Report to Printer? (Y/N) N

The user must first decide which group of employees are to be included in this report, and enter the corresponding number. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must then decide which month the report will be based on and enter the date of the last day of this month. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must also decide whether to send the report to the printer or not. If it is not sent to the printer, it is sent to the terminal screen. The default will send it to the screen.

Accidents for a Given Month Menu

If number two was entered on the Accident Reports menu, it will then be replaced by the following menu.

Choose Number that Matches
Group Wanted 0

1 **PICKERING G.S. 'B' CONSTRUCTION**
2 **LINES & STATIONS & MISC. PROJ.**
3 **ADMINISTRATION & SERVICES**
4 **CONTRACTOR**
5 **ALL GROUPS**

Enter Date of Last Day of Month Wanted 01/01/01 **MM/DD/YY**

Send Report to Printer? (Y/N) N

The user must first decide which group of employees are to be included in this report, and enter the corresponding number. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must then decide which month the report will be based on and enter the date of the last day of this month. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must also decide whether to send the report to the printer or not. If it is not sent to the printer, it is sent to the terminal screen. The default will send it to the screen.

Weekly Summary of MA's and LTI's Menu

If number three was entered on the Accident Reports menu, it will then be replaced by the following menu.

Choose Number that Matches
Group Wanted 0

1 PICKERING G.S. 'B' CONSTRUCTION
2 LINES & STATIONS & MISC. PROJ.
3 ADMINISTRATION & SERVICES
4 CONTRACTOR
5 ALL GROUPS

Enter Friday Date of Week Wanted 01/01/01 **MM/DD/YY**

Send Report to Printer? (Y/N) N

The user must first decide which group of employees are to be included in this report, and enter the corresponding number. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must then decide which week the report will be based on and enter the date of the Friday of this week. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must also decide whether to send the report to the printer or not. If it is not sent to the printer, it is sent to the terminal screen. The default will send it to the screen.

Outstanding Lost Time Injuries Menu

If number four was entered on the Accident Reports menu, it will then be replaced by the following menu.

Choose Number that Matches
Group Wanted 0

1 PICKERING G.S. 'B' CONSTRUCTION
2 LINES & STATIONS & MISC. PROJ.
3 ADMINISTRATION & SERVICES
4 CONTRACTOR
5 ALL GROUPS

Enter Date to be Used as Still on Compensation 01/01/01 **MM/DD/YY**

Send Report to Printer? (Y/N) N

The user must first decide which group of employees are to be included in this report, and enter the corresponding number. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must also decide which day is to be used as still on compensation and enter the date of this day. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must last decide whether to send the report to the printer or not. If it is not sent to the printer, it is sent to the terminal screen. The default will send it to the screen.

Summary of MA's and LTI's Menu

If number five was entered on the Accident Reports menu, it will then be replaced by the following menu.

Choose Number that Matches
Group Wanted 0

1 PICKERING G.S. 'B' CONSTRUCTION
2 LINES & STATIONS & MISC. PROJ.
3 ADMINISTRATION & SERVICES
4 CONTRACTOR
5 ALL GROUPS

Send Report to Printer? (Y/N) N

The user must first decide which group of employees are to be included in this report, and enter the corresponding number. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must then decide whether to send the report to the printer or not. If it is not sent to the printer, it is sent to the terminal screen. The default will send it to the screen.

Accident Summary by Category Menu

If number six was entered on the Accident Reports menu, it will then be replaced by the following menu.

Choose Number that Matches
Group Wanted 0

1 PICKERING G.S. 'B' CONSTRUCTION
2 LINES & STATIONS & MISC. PROJ.
3 ADMINISTRATION & SERVICES
4 CONTRACTOR
5 ALL GROUPS

Enter Date of Last Day of Year Wanted 01/01/01 MM/DD/YY

Send Report to Printer? (Y/N) N

Would You Like All Categories Printed? (Y/N) N

The user must first decide which group of employees are to be included in this report, and enter the corresponding number. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must then decide which month the report will be based on and enter the date of the last day of the month. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must next decide whether to send the report to the printer or not. If it is not sent to the printer, it is sent to thee terminal screen. The default will send it to the screen. The user must also decide whether all categories of accidents should be displayed in the report. If this is not wanted, then only the categories which had accidents will be displayed. The default will display only the categories which had accidents.

K.R.A. Report Menu

If number seven was entered on the Accident Reports menu, it will then be replaed by the following menu.

Choose Number that Matches
Group Wanted 0

1 PICKERING G.S. 'B' CONSTRUCTION
2 LINES & STATIONS & MISC. PROJ.
3 ADMINISTRATION & SERVICES
4 CONTRACTOR
5 ALL GROUPS

Enter Date of Last Day of Month Wanted 01/01/01 **MM/DD/YY**

Send Report to Printer? (Y/N) N

The user must first decide which group of employees are to be included in this report, and enter the corresponding number. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must then decide which monnth the report will be based on and enter the date of the last day of this month. If nothing is entered, the Safety System will return to the Accident Reports menu. The user must also decide whether to send the report to thee printer or not. If it is not sent to the printer, it is sent to the terminal screen. The default will send it to the screen.

4.3 Medical Reports Menu

If number three was entered on the Main menu, it will then be replaced by the following menu.

MEDICAL REPORTS

1> MEDICAL HISTORY OF EMPLOYEE
9> EXIT

ENTER (1 - 9): _

The user must enter a number between 1 and 9. If number 1 is entered, the corresponding report is started. If number 2,3,4,5,6,7, or 8, is entered, nothing will happen. If number 9 is entered, the Safety System returns to the Main menu.

Medical History of Employee Menu

If number one was entered on the Medical Reports menu, it will be replaced by the following menu.

Enter SIN Number of Employee Wanted _____0

Send Report to Printer? (Y/N) N

The user must enter the SIN number of the employee wanted. If nothing is entered, the Safety System will return to the medical reports menu. The user must decide whether to send the report to the printer or not. If it is not sent to the printer, it is sent to the terminal screen. The default will send it to the screen.

If the SIN number entered is not found in the Employee General Information data, the following menu will appear.

SIN Number: nnnnnnnnn Not Found in Employee Information File
Press any key to continue...

If any key is entered, the system will return to the Medical Reports menu.

4.4 Update Data Menu

If number four was entered on the Main menu, it will then be replaced by the following menu.

UPDATE DATA BASE FILES

1> GENERAL EMPLOYEE INFORMATION FILE
2> ACCIDENT INFORMATION FILE
9> EXIT

ENTER (1 - 9): __

The user must enter a number between 1 and 9. If number 1 or 2 is entered, the corresponding function is started. If number 3,4,5, 6,7 or 8, is entered, nothing will happen. If number 9 is entered, the Safety System returns to the Main menu.

4.4.1 General Employee Information Menu

If number one was entered on the Update Data menu, it will then be replaced by the following menu.

UPDATE GENERAL EMPLOYEE INFORMATION FILE

1> DELETE EMPLOYEE FROM FILE
2> ADD EMPLOYEE TO FILE
3> MODIFY EMPLOYEE INFORMATION
9> EXIT

Enter (1 - 9): _

The user must enter a number between 1 and 9. If number 1,2, or 3, is entered, the corresponding function is started. If number 4,5,6,7, or 8 is entered, nothing will happen. If number 9 is entered, the Safety System returns to the Update Data menu.

Delete Employee Menus

If number one was entered on the General Employee Information menu, it will then be replaced by the folloing menu.

```
Enter SIN Number to Delete
NNNNNNNNN: _____
```

If nothing is entered for a SIN number, the system will return to the General Employee Information menu. If the SIN number entered is not found in the General Employee Information data, the following menu will appear.

```
SIN Number: nnnnnnnnn
Not Found in General Information File
Press any key to continue...
```

If any key is entered, the system will return to the General Employee Information menu.

If the SIN number entered is found in the General Employee Information data, the following menu will appear.

```
Employee Number = nnnnn
Employee Last Name = xxxx
Employee First Name = xxxx
SIN Number = nnnnnnnnn
Badge Number = nnnn

Delete This Record? (Y/N) N
```

If the user types a 'Y' or 'y', the system will delete the General Employee Information data for the given SIN number. If the user types 'N' or 'n', the system will not delete anything. The default answer is 'N'. Once this function is completed, the system will return to the General Employee Information menu.

Add Employee Menus

If number two was entered on the General Employee Information menu, it will then be replaced by the following menu.

```
Enter SIN Number to Add
NNNNNNNNN: _________
```

If nothing is entered for a SIN number, the system will return to the General Employee Information menu. If the SIN number entered is found in the General Employee Information data, the following menu will appear.

```
SIN Number: nnnnnnnnn
Already in General Information File
Press any key to continue...
```

If any key is entered, the system will return to the General Employee Information menu.

If the SIN number entered is not found in the General Employee Information data, a series of five menus will appear. The first menu is called screen number 1.

```
GENERAL INFORMATION FILE
SCREEN NUMBER 1

   Employee Name
   Last ___________
   First ___________

   Employee Number _________
   SIN Number nnnnnnnnn

   Badge Number _____
   Commencement Date __/__/__ MM/DD/YY
   Established Commencement Date __/__/__ MM/DD/YY

***ALL ANSWERS SHOULD BE IN CAPITALS***

To abort input press ESC to exit

Screen Entered Correctly? (Y/N) _
```

If some of the information asked for is not available, it can be added in later using the Modify Employee menus. Since the SIN number has already been entered, it is displayed. When entering information the alphabetic data should be in capital letters. If the user exits this screen by pressing the ESC key, the system will keep only the SIN number for the employee, and then return to the General Employee Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?" with

'Y' or 'y' then the system moves on to the next menu. If the user answers 'N' or 'n' then the system will display the same menu again.

The second menu is called screen number 2.

```
GENERAL INFORMATION FILE
SCREEN NUMBER 2

   Payroll Number ____
   Wage Rate Group __

   Atomic Radiation Worker? (Y/N)? __
   DISN _______

   Date of Last Blood Work __/__/__      MM/DD/YY
   Date of Last ARW Medical __/__/__     MM/DD/YY
   Date of Last Non-ARW Medical __/__/__ MM/DD/YY

***ALL ANSWERS SHOULD BE IN CAPITALS***

To abort input press ESC to exit

Screen Entered Correctly? (Y/N) __
```

If some of the information asked for is not available, it can be added in later using the Modify Employee menus. If the user exits this screen by pressing the ESC key, the system will keep only the data entered on the first screen, and then return to the General Employee Information menu. If the user exits this screen by answering the question. "Screen Entered Correctly?" with 'Y' or 'y', then the system moves to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

The third menu is called screen number 3.

```
GENERAL INFORMATION FILE
SCREEN NUMBER 3

   Choose Number That Matches
   Occupational/Job Title _____0

1  TRADES-STRUCTURAL                  11  TRADES-SCAFFOLD INSPECTOR
2  TRADES-MECHANICAL                  12  TRADES-CONFINE SPACE TESTER
3  TRADES-PIPING                      13  TRADES-CRANE OPERATORS
4  TRADES-ELECTRICAL                  14  STAFF-MECHANICAL
5  TRADES-LSFCR                       15  STAFF-CIVIL
6  TRADES-SHOPS                       16  STAFF-ELECTRICAL
7  TRADES-MATERIALS                   17  STAFF-SFT
9  TRADES-GENERAL FOREMAN             18  STAFF-ENG. OR ASST. ENG.
10 TRADES-SUPERINTENDENT

   ***ALL ANSWERS SHOULD BE IN CAPITALS***

   To abort input press ESC to exit
```

If the user exits this screen by pressing the ESC key, the system will keep only the data entered on the first and second screen, and then return to the General Employee Information menu. If the user enters a number for "Occupation/Job Title," then the system moves to the next menu.

The fourth menu is called screen number 4.

```
GENERAL INFORMATION FILE
SCREEN NUMBER 4

  Home Address _____________________
  Home Address _____________________
  Name of City/Town _________
  Name of Province _________
  Postal Code ________

  Sex (M or F) ___
  Marital Status (M or S) ___

***ALL ANSWERS SHOULD BE IN CAPITALS***

To abort input press ESC to exit

Screen Entered Correctly?  (Y/N)  ___
```

If some of the information asked for is not available, it can be added in later using the Modify Employee menus. If the user exits this screen by pressing the ESC key, the system will keep only the data entered on the first three screens, and then return to the General Employee Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?" with 'Y' or 'y', then the system moves to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

The fifth menu is called screen number 5.

```
GENERAL INFORMATION FILE
SCREEN NUMBER 5

   Employee Class Code __
   Home Phone Number_____________
   Date of Birth ___/___/___  MM/DD/YY

   Personal Exemption Amount _______.__
   Personal Claim Code __

***ALL ANSWERS SHOULD BE IN CAPITALS***

To abort input press ESC to exit

Screen Entered Correctly? (Y/N) _
```

If some of the information asked for is not available, it can be added in later using the Modify Employee menus. If the user exits this screen by pressing the ESC key, the system will keep only the data entered on the first four screens, and then return to the General Employee Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'N' or 'n', then the system will display the question below.

```
Add Another Employee to File? (Y/N) N
```

If this question is answered 'Y' or 'y', the system returns to the beginning of the Add Employee menus. If this question is answered 'N' or 'n', the system returns to the General Employee Information.

Modify Employee Menus

If number three was entered on the General Employee Information menu, it will then be replaced by the following menu.

```
Enter SIN Number to Modify
NNNNNNNNN: _________
```

If nothing is entered for a SIN number, the system will return to the General Employee Information menu. If the SIN number entered is not found in the General Employee Information data, the following menu will appear.

```
SIN Number: nnnnnnnnn
Not Found in General Information File
Press any key to continue...
```

If any key is entered, the system will return to the General Employee Information menu.

If the SIN number entered is found in the General Employee Information data, a series of five menus will appear. The first menu is called screen number 1.

```
GENERAL INFORMATION FILE
SCREEN NUMBER 1

Screen Entered Correctly?  (Y/N)  ?

   Employee Name
   Last xxxx _________
   First xxxx ____

   Employee Number nnnnnn
   SIN Number nnnnnnnnn

   Badge Number nnnn
   Commencement Date dd/dd/dd  MM/DD/YY
   Established Commencement Date dd/dd/dd  MM/DD/YY

***ALL ANSWERS SHOULD BE IN CAPITALS***

To abort input press ESC to exit

To jump to next screen press CTRL-END
```

When entering information, the alphabetic data should be in capital letters. if the user exits this screen by pressing the ESC key, the system will not keep any changes made to this screen, but returns to the General Employee Information menu. If the user exits this screen by answering the question "Screen Entered Correctly?", with 'Y' or 'y', and then pressing CTRL-END, the system saves any changes, and moves on to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

The second menu is called screen number 2

```
GENERAL INFORMATION FILE
SCREEN NUMBER 2

Screen Entered Correctly? (Y/N) ?

   Payroll Number nnnn
   Wage Rate Group nn
   Atomic Radiation Worker? (Y/N) x

   Date of Last Blood Work dd/dd/dd        MM/DD/YY
   Date of Last ARW Medical dd/dd/dd       MM/DD/YY
   Date of Last Non-ARW Medical dd/dd/dd   MM/DD/YY

***ALL ANSWERS SHOULD BE IN CAPITALS***

To abort input press ESC to exit

To jump to next screen press CTRL-END
```

When entering information, the alphabetic data should be in capital letters. If the user exits this screen by pressing the ESC key, the system will not keep any changes made to this screen, but returns to the General Employee Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'Y' or 'y', and then pressing CTRL-END, the system saves any changes, and moves on to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

The third menu is called screen number 3.

```
GENERAL INFORMATION FILE
SCREEN NUMBER 3

   Choose Number that Matches
   Occupation/Job Title ____ nn

 1  TRADES-STRUCTURAL                 11  TRADES-SCAFFOLD INSPECTOR
 2  TRADES-MECHANICAL                 12  TRADES-CONFINE SPACE TESTER
 3  TRADES - PIPING                   13  TRADES-CRANE OPERATORS
 4  TRADES-ELECTRICAL                 14  STAFF-MECHANICAL
 5  TRADES-LSFCR                      15  STAFF-CIVIL
 6  TRADES-SHOPS                      16  STAFF-ELECTRICAL
 8  TRADES-FOREMAN/S/F/               17  STAFF-SFT
 9  TRADES-GENERAL FOREMAN            18  STAFF-ENG. OR ASST. ENG.
10  TRADES-SUPERINTENDENT

***ALL ANSWERS SHOULD BE IN CAPITALS***

To abort input press ESC to exit
```

If the user exits this screen by pressing the ESC key, the system will not keep the change, if made, but will continue with next menu. If the user exits this screen any other way, the system will keep the change, if made, and will continue with next menu.

The fourth menu is called screen number 4.

```
GENERAL INFORMATION FILE
SCREEN NUMBER 4

Screen Entered Correctly? (Y/N) _?_

   Home Address  xxx xxxxxxx xxxxxx
   Home Address  ____________________
   Name of City/Town  xxxxxxx
   Name of Province  xxxxxxx
   Postal Code xxx-xxx

   Sex (M or F)  x
   Marital Status (M or S)  x

***ALL ANSWERS SHOULD BE IN CAPITALS***

To abort input press ESC to exit.

To jump to next screen press CTRL- END.
```

When entering information, the alphabetic data should be in capital letters. If the user exits this screen by pressing the ESC key, the system will not keep any changes made to this screen,

but returns to the General Employee Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'Y' or 'y', and then pressing CTRL-END, the system saves any changes, and moves on to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

The fifth menu is called screen number 5.

GENERAL INFORMATION FILE
SCREEN NUMBER 5

Screen Entered Correctly? (Y/N) ?
Home Phone Number xxx-xxx-xxx
Date of Birth dd/dd/dd MM/DD/YY

Personal Exemption Amount nnnn.nn
Personal Claim Code nn

*****ALL ANSWERS SHOULD BE IN CAPITALS*****

To abort input press ESC to exit

To jump to next screen press CTRL-END

If the user exits this screen by pressing the ESC key, the system will not keep any changes made to this screen, but returns to the General Employee Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'N' or 'n', then the system will display the menu again. If the user answers 'Y' or 'y', the system displays the question below.

Modify Another Employee in File? (Y/N) N

If the question is answered 'Y' or 'y', the system returns to the beginning of the Modify Employee menus. if the question is answered 'N' or 'n', the system returns to the General Employee Information menu.

4.4.2 Accident Information Menu

If number two was entered on the Update Data menu, it will then be replaced by the following menu.

UPDATE ACCIDENT INFORMATION FILE

1> DELETE ACCIDENT FROM FILE
2> ADD ACCIDENT TO FILE
3> MODIFY ACCIDENT INFORMATION
4> EXIT

Enter (1 - 9): _

The user must enter a number between 1 and 9. If number 1,2, or 3, is entered, the corresponding function is started. If number 4,5,6,7, or 8 is entered, nothing will happen. If number 9 is entered, the Safety System returns to the Update Data menu.

Delete Accident Menu

If number one was entered on the Accident Information menu, it will then be replaced by the following menu.

```
Enter SIN Number of Employee
NNNNNNNNN: _________
```

If nothing is entered for a SIN number, the system will return to the Accident Information menu. If the SIN number entered is not found in the Accident Information data, the following menu will appear.

```
SIN Number: nnnnnnnnn
Not Found in Accident Information File
Press any key to continue...
```

If any key is entered, the system will return to the Accident Information menu.

If the SIN number entered is found in the Accident Information data, the following menu will appear.

```
Enter Accident Number Wanted
NNNNNN: ______

   nnn   dd/dd/dd
```

The user then enters the number of the accident to be deleted. If nothing is entered the system will return to the Accident Information menu. The system will search for accident desired and then display the following menu.

```
SIN Number =     nnnnnnnnn
Accident Number =          n
Date of Accifent =  dd/dd/dd
Class of Injury =    x
Type of Injury =    xxxxxxxxxx
Sub-Energy Field =  xxxxxxxx

Delete This Record? (Y/N) N
```

If the user types 'Y' or 'y', the system will delete the Accident Information data for the given Accident number. If the user types 'N' or 'n', the system will not delete anything. The default answer is 'N'. Once this function is completed, the system will return to the Accident Information menu.

Add Accident Menu

If number two was entered on the Accident Information menu, it will then be replaced by the following menu.

```
Enter SIN Number of Employee
NNNNNNNNN: _________
```

If nothing is entered for a SIN number, the system will return to the Accident Information menu. If the SIN number entered is found in the Accident Information data, the following menu will appear.

```
Employee Number = nnnnnn
Employee Last Name =  xxxxx
Employee First Name = xxxxx
SIN Number =   nnnnnnnnn
Badge Number =  nnnn

Correct Employee? (Y/N) Y
```

If the user enters 'N' or 'n', the system will return to the Accident Information menu. If the user leaves the default or enters 'Y' or 'y', the system will continue. If the employee has had previous accidents, the following menu will appear.

```
Employee Has Had Previous Accidents
Display Most Recent Accident? (Y/N) N
```

If the user enters 'Y' or 'y', the following menu will appear.

```
SIN Number =   nnnnnnnnn
Accident Number =      n
Date of Accident = dd/dd/dd
Class of Injury =  x
Type of Injury =   xxxxxxxxx
Sub-Energy Field = xxxxxxxx

Press any key to continue...
```

If any key is entered by the user, the system will now begin to add a new accident. A series of nine menus will appear. The first menu is called screen number 1.

```
ACCIDENT INFORMATION FILE
     SCREEN NUMBER 1

        Accident Number =        nn
        Date of Accident = dd/dd/dd  MM/DD/YY
        Time of Accident = _______
        Date Accident Reported = dd/dd/dd  MM/DD/YY
        Time Accident Reported _______
        First Aid Required? (Y/N) ?
        Medical Attention?  (Y/N) ?
        Lost Time Injury?   (Y/N) ?
        Fatal Accident?     (Y/N) ?
        Doctor That Checked-Last Name _____________________
                           -First Name _____________________
        Witness to Accident-Last Name _____________________
                           -First Name _____________________

     To abort input press ESC to exit

     Screen Entered Correctly? (Y/N) ?
```

If some of the information asked for is not available, it can be added in later using the Modify Accident menus. When entering information the alphabetic data should be in capital letters. If the user exits this screen by pressing the ESC key, the system will keep only the default date values and the SIN number, and then return to the Accident Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'Y' or 'y', then the system moves on to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

The second menu is called screen number 2.

```
     ACCIDENT INFORMATION FILE
     SCREEN NUMBER 2

        Date First Aid Given dd/dd/dd   MM/DD/YY
        Time First Aid Given _______
        Date of Medical Attention dd/dd/dd   MM/DD/YY
        Time of Medical Attention _______

        Date Last Worked 12/31/99   MM/DD/YY
        Time Last Worked _______
        Date Returned to Work 12/31/99 MM/DD/YY
        Time Returned to Work ______

        Date Sent to WCB 12/31/99   MM/DD/YY

     To abort input press ESC to exit

     Screen Entered Correctly? (Y/N) ?
```

If the user exits this screen by pressing the ESC key, the Safety System will keep only the data entered on the first screen and the defaults on this screen, and then return to the Accident Information menu. If the user exits this screen by answering the question "Screen Entered Correctly?" with 'Y' or 'y', then the system moves to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again. The third menu is called screen number 3.

ACCIDENT INFORMATION FILE
SCREEN NUMBER 3

SIN Number = nnnnnnnnn
Location of Accident _____

Super's Last Name _____
Super's First Name _____

Boss of Super's Last Name _____
Boss of Super's First Name _____

*****ALL ANSWERS SHOULD BE IN CAPITALS *****

To abort input press ESC to exit

Screen Entered Correctly? (Y/N) ?

If the user exits this screen by pressing the ESC key, the system will keep only the data entered on the previous screens, and then return to the Accident Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'Y' or 'y', then the system moves to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

The fourth menu is called screen number 4.

ACCIDENT INFORMATION FILE
SCREEN NUMBER 4

Class of Injury (A,B,C or D)___
Choose Number that Matches
Type of Injury _0

1	LACERATION	14	BURN
2	ABRASION	15	IRRITATION
3	CONTUSION	16	PARTICLE
4	PINCH	17	EMBEDDED PARTICLE
5	STRAIN	18	ILLNESS
6	SPRAIN	19	AMPUTATION
7	PUNCTURE	20	FATALITY
8	TORN	21	LOSS OF SIGHT
9	CRUSH	22	UNCONSCIOUS
10	PULLED	23	SHOCK
11	DISLOCATED	24	BREATHING STOP
12	INFLAMED		
13	INFECTED		

To abort input press ESC to exit

If the user exits this screen by pressing the ESC key, the system will keep only the data entered on the previous screens, and then return to the Accident Information menu. If the user enters the type of injury, the system will move to the next menu.

The fifth menu is called screen number 5.

```
ACCIDENT INFORMATION FILE
SCREEN NUMBER 5

     Choose Number That Matches
     Body Part Affected _0

 1  FINGERS/THUMBS              11  NO APPARENT INJURY
 2  LEGS/ANKLES                 12  INTERNAL
 3  BACK                        13  ILLNESS
 4  EYES                        14  MULTIPLE
 5  ARMS/SHOULDERS/WRISTS
 6  HEAD/FACE/NECK
 7  HANDS
 8  TRUNK/HIP
 9  FEET
10  TOES

To abort input press ESC to exit.
```

If the user exits this screen by pressing the ESC key, the system will keep only the data entered on the previous screens, and then return to the Accident Information menu. If the user enters the body part affected, the system will move to the next menu.

The sixth menu is called screen number 6.

```
ACCIDENT INFORMATION FILE
SCREEN NUMBER 6

     Choose Number that Matches
     Sub-Energy Field _0

1  FALLING PERSON UNDER 5 FEET      15  ELECT.CONT. 150 KV-230 KV
2  FALLING PERSON OVER 5 FEET       16  ELECT.CONT. 230 KV-500 KV
3  LIFTING                          17  ELECT.BURN  0-350
4  PUSHING                          18  ELECT.BURN  350-750
5  CARRYING                         19  ELECT.BURN  750-15000
6  CLIMBING                         20  ELECT.BURN  15000-150000
7  BENDING                          21  ELECT.BURN  150 KV-230 KV
8  TWISTING                         22  ELECT.BURN  230 KV-500 KV
9  WALKING                          23  ELECT.FLASH 0-350
10 INVOLUNTARY MOVEMENT             24  ELECT.FLASH 350-750
11 ELECT.CONT. 0-350                25  ELECT.FLASH 750-15000
12 ELECT.CONT. 350-750              26  ELECT.FLASH 15000-150000
13 ELECT.CONT. 750-15000            27  ELECT.FLASH 150 KV-230 KV
14  ELECT.CONT. 15000-150000        28  ELECT.FLASH 230 KV-500 KV

To abort input press ESC twice to exit

More Choices on Next Screen
```

If the user exits this screen by pressing the ESC key twice, the system will keep only the data entered on the previous screens, and then return to the Accident Information menu. If the user enters the Sub-energy field, the system will move to the next menu. If the user just presses the RETURN key, more choices will be displayed to choose from.

The seventh menu is called screen number 7.

```
ACCIDENT INFORMATION FILE
SCREEN NUMBER 7

     Choose Number That Matches
     Group __

1  PICKERING G.S. 'B' CONSTRUCTION
2  LINES & STATIONS & MISC. PROJ.
3  ADMINISTRATION & SERVICES
4  CONTRACTOR

To abort input press ESC to exit.
```

If the user exits this screen by pressing the ESC key, the system will keep only the data entered on the previous screens, and then return to the Accident Information menu. If the user enters the group number, the system will move to the next menu.

The eighth menu is called screen number 8.

```
ACCIDENT INFORMATION FILE
SCREEN NUMBER 8

     Choose Number That Matches
     Sub-Group _0

1  TRADES-STRUCTURAL
2  TRADES-ELECTRICAL
3  TRADES-MECH/PIP.
4  STAFF

To abort input press ESC to exit.
```

If the user exits this screen by pressing the ESC key, the system will keep only the data entered on the previous screens, and then return to the Accident Information menu. If the user enters the sub-group number, the system will move to the next menu.

The ninth menu is called screen number 9.

ACCIDENT INFORMATION FILE
SCREEN NUMBER 9

Description of Accident Should Include

(1) What Happened
(2) Effort Involved
(3) Location
(4) Size, Weight, Height, Voltage
(5) Description of Injury
(6) Conditions Contributing to Accident

_____
_____
_____
_____
_____

*****ALL ANSWERS SHOULD BE IN CAPITALS*****

To abort input press ESC to exit

Screen Entered Correctly? (Y/N) ?

If the user exits this screen by pressing the ESC key, the system will keep only the data entered on previous screens, and then return to the Accident Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'N' or 'n', then the system will display the menu again. If the user answers 'Y' or 'y', the system displays the following question.

Add Another Accident to File? (Y/N) N

If the question is answered 'Y' or 'y', the system returns to the beginning of the Add Accident menus. If the question is answered 'N' or 'n', the system returns to the Accident Information menu.

Modify Accident Menus

If number three was entered on the Accident Information menu, it will then be replaced by the following menu.

Enter SIN Number of Employee
NNNNNNNNN: _____

If nothing is entered for a SIN number, the system will return to the Accident Information menu. If the SIN number entered is not fund in the Accident Information data, the following menu will appear.

```
SIN Number: nnnnnnnnn

Not Found in Accident Information File
Press any key to continue...
```

If any key is entered, the system will return to the Accident Information menu.

If the SIN number entered is found in the Accident Information data, the following menu will appear.

```
Enter Accident Number Wanted
NNNNNN: _____

 nnn      dd/dd/dd
 nnn      dd/dd/dd
 nnn      dd/dd/dd
```

If the user does not enter an accident number, the system will return to the Accident Information menu.

If the accident number entered is found in the Accident Information data, a series of nine menus will appear. The first menu is called screen number 1.

```
ACCIDENT INFORMATION FILE
SCREEN NUMBER 1
Screen Entered Correctly?  (Y/N) ?

     Accident Number =          n
     Date of Accident dd/dd/dd     MM/DD/YY
     Time of Accident nn.nn
     Date Accident Reported dd/dd/dd      MM/DD/YY
     Time Accident Reported nn.nn
     First Aid Required? (Y/N) x
     Medical Attention?  (Y/N) x
     Lost Time Injury?   (Y/N) x
     Fatal Accident?     (Y/N) x
     Doctor That Checked - Last Name  xxxxxx
                         - First Name xxxxx
     Witness to Accident - Last Name  xxxxxx
                         - First Name xxxx

To abort input press ESC to exit

To jump to next screen press CTRL-END
```

When entering information, the alphabetic data should be in capital letters. if the user exits this screen by pressing the ESC key, the system will not keep any changes made to this screen, but returns to the Accident Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'Y' or 'y', and then pressing CTRL-END, the system saves any changes and moves to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

The second menu is called screen number 2.

ACCIDENT INFORMATION FILE
SCREEN NUMBER 2

Screen Entered Correctly? (Y/N) ?

Date First Aid Given dd/dd/dd MM/DD/YY
Time First Aid Given nn.nn
Date of Medical Attention dd/dd/dd MM/DD/YY
Time of Medical Attention nn.nn

Date Last Worked dd/dd/dd MM/DD/YY
Time Last Worked nn.nn
Date Returned to Work dd/dd/dd MM/DD/YY
Time Returned to Work nn.nn

Date Sent to WCB dd/dd/dd MM/DD/YY

To abort input press ESC to exit

To jump to next screen press CTRL-END

If the user exits this screen by pressing the ESC key, the system will not keep any changes made to this screen, but returns to the Accident Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'Y' or 'y', and then pressing CTRL-END, the system saves any changes and moves to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

The third menu is called screen number 3.

```
ACCIDENT INFORMATION FILE
SCREEN NUMBER 3

Screen Entered Correctly?  (Y/N) ?

     SIN Number = nnnnnnnnn

     Location of Accident xxxxxxxxxxxx

     Super's Last Name xxxxxxx
     Super's First Name xxx

     Boss of Super's Last Name xxxxxxx
     Boss of Super's First Name xxxxxxx

***ALL ANSWERS SHOULD BE IN CAPITALS***

To abort input press ESC to exit

To jump to next screen press CTRL-END
```

When entering information, the alphabetic data should be in capital letters. If the user exits this screen by pressing the ESC key, the system will not keep any changes made to this screen, but returns to the Accident Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'Y' or 'y', and then pressing CTRL-END, the system saves any changes and moves to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

The fourth menu is called screen number 4.

ACCIDENT INFORMATION FILE
SCREEN NUMBER 4

Class of Injury (A,B,C, or D) x
Choose Number That Matches
Type of Injury nn

1	LACERATION	14	BURN
2	ABRASION	15	IRRITATION
3	CONTUSION	16	PARTICLE
4	PINCH	17	EMBEDDED PARTICLE
5	STRAIN	18	ILLNESS
7	PUNCTURE	19	AMPUTATION
8	TORN	20	FATALITY
9	CRUSH	21	LOSS OF SIGHT
10	PULLED	22	UNCONSCIOUS
11	DISLOCATED	23	SHOCK
12	INFLAMED	24	BREATHING STOP
13	INFECTED		

To abort input press ESC to exit

If the user exits this screen by pressing the ESC key, the system will keep only previous changes, and then continues with the next menu. If the user exits this screen any other way, the Safety System will keep any changes, and will continue with the next menu.

The fifth menu is called screen number 5.

```
ACCIDENT INFORMATION FILE
SCREEN NUMBER 5

     Choose Number That Matches
     Body Part Affected nn

 1  FINGERS/THUMBS              11  NO APPARENT INJURY
 2  LEGS/ANKLES                 12  INTERNAL
 3  BACK                        13  ILLNESS
 4  EYES                        14  MULTIPLE
 5  ARMS/SHOULDERS/WRISTS
 6  HEAD/FACE/NECK
 7  HANDS
 8  TRUNK/HIP
 9  FEET
10  TOES

To abort input press ESC to exit
```

If the user exits this screen by pressing the ESC key, the system will keep only previous changes, and then continue with the next menu. if the user exits this screen any other way, the system will keep the new value of body part, and will continue with the next menu.

The sixth menu is called screen number 6.

```
ACCIDENT INFORMATION FILE
SCREEN NUMBER 6

     Choose Number That Matches
     Sub-Energy Field nn

1  FALLING PERSON UNDER 5 FEET      15  ELECT.CONT. 150 KV-230 KV
2  FALLING PERSON OVER 5 FEET       16  ELECT.CONT. 230 KV-500 KV
3  LIFTING                          17  ELECT.BURN  0-350
4  PUSHING                          18  ELECT.BURN  350-750
5  CARRYING                         19  ELECT.BURN  750-15000
6  CLIMBING                         20  ELECT.BURN  15000-150000
7  BENDING                          21  ELECT.BURN  150 KV-230 KV
8  TWISTING                         22  ELECT.BURN  230 KV-500 KV
9  WALKING                          23  ELECT.FLASH 0-350
10 INVOLUNTARY MOVEMENT             24  ELECT.FLASH 350-750
11 ELECT.CONT. 0-350                25  ELECT.FLASH 750-15000
12 ELECT.CONT. 350-750              26  ELECT.FLASH 15000-150000
13 ELECT.CONT. 750-15000            27  ELECT.FLASH 150 KV-230 KV
14 ELECT.CONT. 15000-150000         28  ELECT.FLASH 230 KV-500 KV

To abort input press ESC twice to exit

More Choices on Next Screen
```

If the user exits this screen by pressing the ESC key twice, the system will keep only previous changes, and then continue with the next menu. If the user enters a new sub-energy value, the system will keep the new value, and will continue with the next screen. If the user presses the ENTER key, more choices will appear on the screen to choose from.

The seventh menu is called screen number 7.

ACCIDENT INFORMATION FILE
SCREEN NUMBER 7

Choose Number That Matches
Group n

1 PICKERING G.S. 'B' CONSTRUCTION
2 LINES & STATIONS & MISC. PROJ.
3 ADMINISTRATION & SERVICES
4 CONTRACTOR

To abort input press ESC to exit

If the user exits this screen by pressing the ESC key, the system will keep only previous changes, and then continue with the next menu. If the user exits this screen any other way, the system will keep the new value of group, and will continue with the next menu.

The eighth menu is called screen number 8.

ACCIDENT INFORMATION FILE
SCREEN NUMBER 8

Choose Number That Matches
Sub-Group n

1 TRADES-STRUCTURAL
2 TRADES-ELECTRICAL
3 TRADES-MECH/PIP.
4 STAFF

To abort input press ESC to exit

If the user exits this screen by pressing the ESC key, the system will keep only previous changes, and then continue with the next menu. If the user exits this screen any other way, the system will keep the new value of sub-group, and will continue with the next menu.

The ninth menu is called *screen number 9*.

ACCIDENT INFORMATION FILE
SCREEN NUMBER 9

Screen Entered Correctly? (Y/N) ?

Description of Accident Should include:
(1) What Happened
(2) Effort Involved
(3) Location
(4) Size, Weight, Height, Voltage
(5) Description of Injury
(6) Conditions Contributing to Accident

Type in Description of Accident

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

*****ALL ANSWERS SHOULD BE IN CAPITALS*****

To abort input press ESC to exit

To save input press CTRL-END to exit

When entering information, the alphabetic data should be in capital letters. If the user exits this screen by pressing the ESC key, the system will not keep any changes made to this screen, but returns to the Accident Information menu. If the user exits this screen by answering the question, "Screen Entered Correctly?", with 'Y' or 'y', and then pressing CTRL-END, the system saves any changes and moves to the next menu. If the user answers 'N' or 'n', then the system will display the same menu again.

If all nine menus are completed correctly, the following menu will appear.

Modify Another Accident in File? (Y/N) N

If the question is answwered 'Y' or 'y', the system returns to the beginning of the Modify Accident menus. if the question is answered 'N' or 'n', the system returns to the Accident Information menu.

APPENDIX A.1

TABLES

TABLE 1

LIST OF EMPLOYEE GENERAL INFORMATION

Variable No.	Variable Name
1	Employee Last Name
2	Employee First Name
3	Employee Number
4	Social Insurance Number
5	Occupation
6	Atomic Radiation Worker
7	DIS Number
8	Wage Rate Group
9	Payroll Number
10	Date of Last Blood Work
11	Date of Last ARW Medical
12	Date of Last Non-ARW Medical
13	Badge Number
14	Commencement Date
15	Address
16	Address Overflow
17	City/Town
18	Province
19	Postal Code
20	Sex
21	Marital Status
22	Class Code
23	Home Phone Number
24	Date of Birth
25	Personal Exemption Amount
26	Personal Claim Code
27	Established Commencement Date
28	Any Accidents?

TABLE 2

LIST OF ACCIDENT INFORMATION

Variable No.	Variable Name
1	Social Insurance Number
2	Date of Accident
3	Time of Accident
4	Date Accident Reported
5	Time Accident Reported
6	Location of Accident
7	Class of Injury
8	Date Last Worked
9	Time Last Worked
10	Date Returned to Work
11	Time Returned to Work
12	Date Sent to WCB
13	Type of Injury
14	Body Part Affected
15	First Aid
16	Medical Attention
17	Lost Time Injury
18	Fatal Accident
19	Energy Field
20	Sub-Energy Field
21	Employee Group
22	Employee Sub-Group
23	Super's Last Name
24	Super's First Name
25	Boss of Super's Last Name
26	Boss of Super's First Name
27	Accident Number
28	Date of First Aid
29	Time of First Aid
30	Date Medical Attention
31	Time Medical Attention
32	Text Line 1
33	Text Line 2
34	Text Line 3
35	Text Line 4
36	Text Line 5
37	Physician Checked - Last Name
38	Physicial Checked - First Name
39	Witness to Accident-Last Name
40	Witness to Accident-First Name

APPENDIX B

A PROGRAMMER'S GUIDE OF THE REVISED SAFETY SYSTEM SOFTWARE PACKAGE

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1. OVERVIEW OF THE REVISED SAFETY SYSTEM

The Revised Safety System designed for the Construction Group at the Pickering NGS was written using the software package DBASE III on an IBM compatible personal computer. The system contains three main functions, which are:

(1) the Accident Report Generation function;
(2) the Medical Report Generation function;
(3) the Update Data function.

The main program will initiate the three functions one at a time. Each of these three functions contain sub-functions which are initiated one at a time. The Accident Report Generation function contains seven sub-functions. The Medical Report Generation function contains one sub-function. The Update Data function contains two sub-functions. Each sub-function of the first two functions generates one report. Each sub-function of the Update Data function, updates a different data file. These data files are called:

(1) General Employee Information file; and
(2) Accident Information file.

Each sub-function of the Update Data function has three tasks. These tasks are initiated one at a time, and are known as:

(1) Add Data;
(2) Delete Data; and
(3) Modify Data.

2. A BREAKDOWN OF THE SOFTWARE

The main program of the Safety System is called MAIN. This program will call one of three subroutines named ACCID, MEDIC, and UPDAT. Each of these subroutines correspond to one of the three main functions, respectively. Figure 1 is a flow diagram of the main program and its three subroutines.

The subroutine ACCID will call one of seven subroutines named ACCID1, ACCID2, ACCID3, ACCID4, ACCID5, ACCID6, and ACCID7. Each of these subroutines correspond to one of the sub-functions of the Accident Report Generation function. Figure 2 is a flow diagram of the subroutine ACCID and its subroutines.

The subroutine MEDIC will call the subroutine MEDIC1. This subroutine corresponds to the sub-function of the Medical Report Generation function. Figure 3 is a flow diagram of the subroutine MEDIC and its subroutine.

The subroutine UPDAT will call one of two subroutines named UPDAT1, and UPDAT2. Each of these subroutines correspond to one of the sub-functions of the Update Data function. Figure 4 is a flow diagram of subroutine UPDAT and its subroutines.

The subroutine UPDAT1 will call one of three subroutines named DEL1, ADD1, and MOD1. Each of these subroutines correspond to one of the three tasks outlined in Section 1. Figure 5 is a flow diagram of subroutine UPDAT1 and its subroutines.

The subroutine UPDAT2 will call one of three subroutines named DEL2, ADD2, and MOD2. Each of these subroutines correspond to one of the three tasks outlined in Section 1. Figure 6 is a flow diagram of subroutine UPDAT2 and its subroutines.

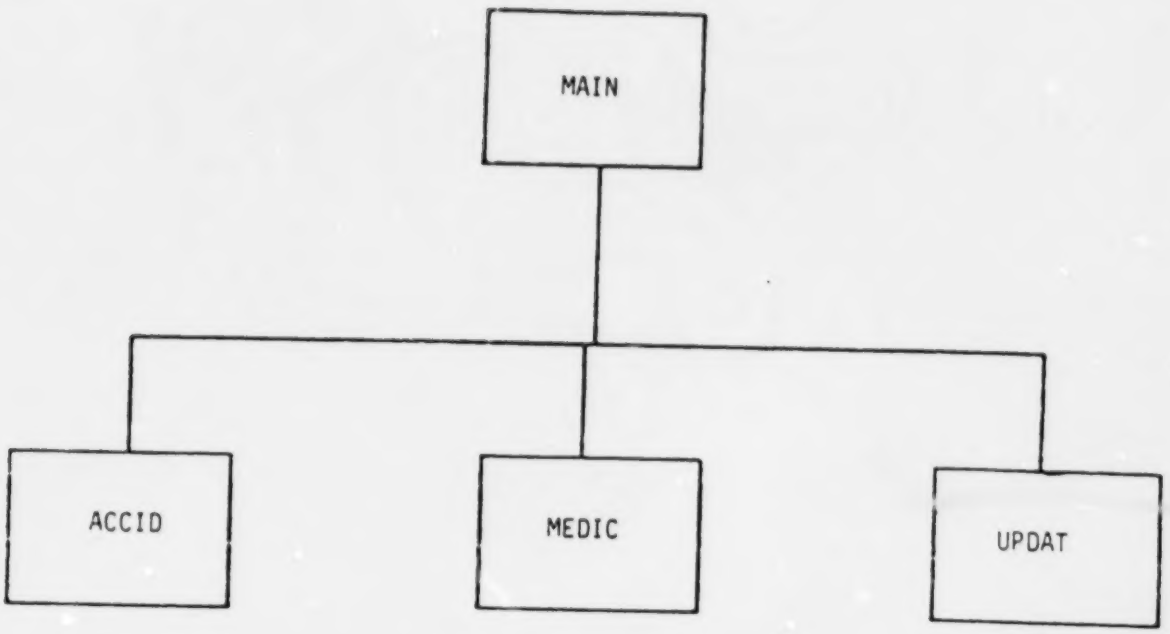

Figure 1

A Flow Diagram of the Main Program
and Its Three Subroutines

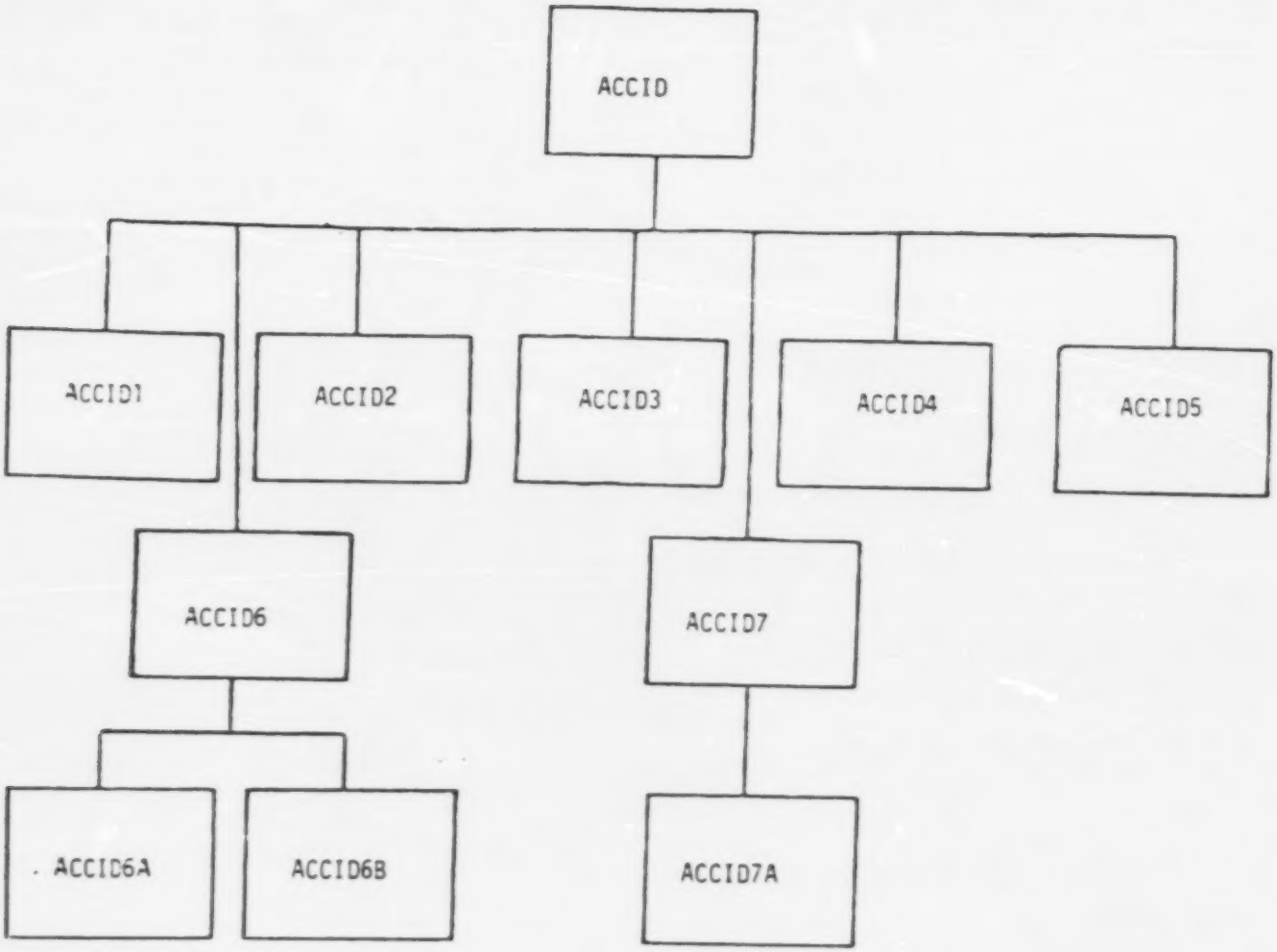

Figure 2

A flow Diagram of the Subroutine ACCID
and its Subroutines

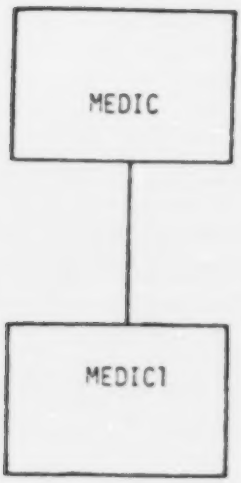

Figure 3

A Flow Diagram of the Subroutine MEDIC
and its Subroutine

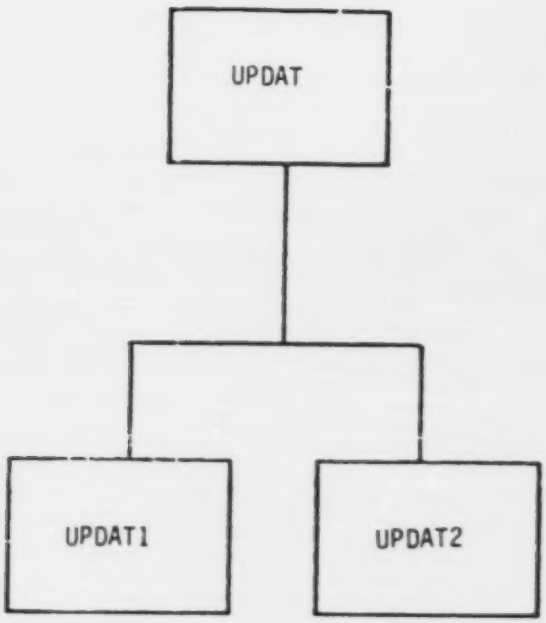

Figure 4

A Flow Diagram of the Subroutine UPDAT
and Its Subroutines

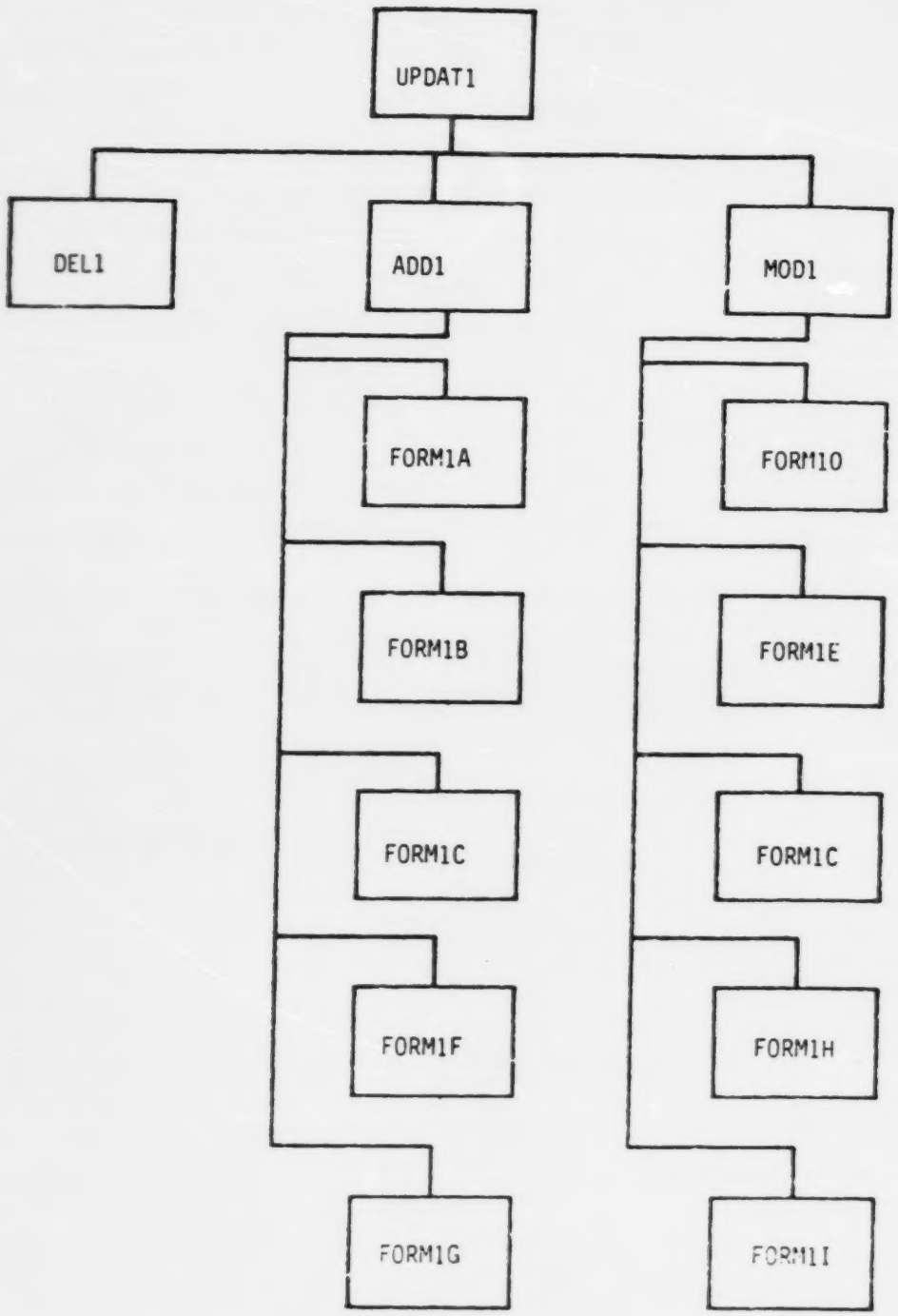

Figure 5

A Flow Diagram of the Subroutine UPDAT1
and Its Subroutines

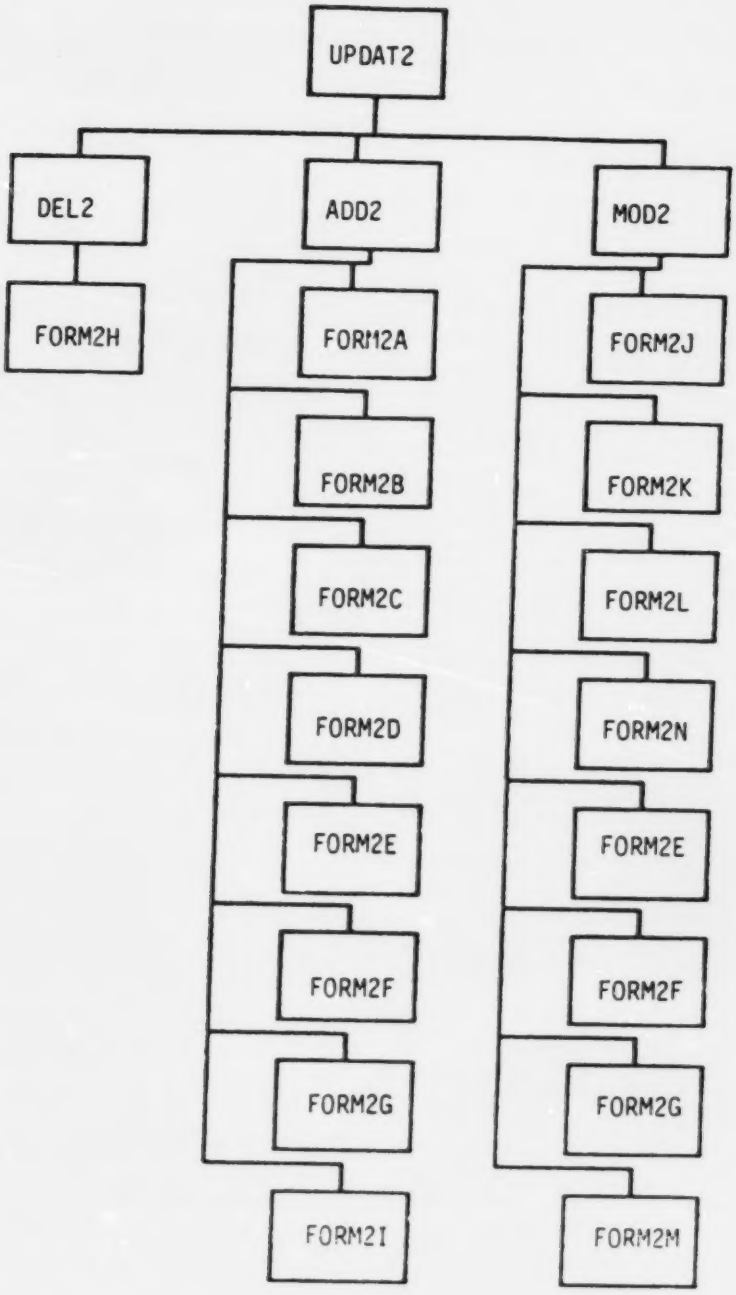

Figure 6

A Flow Diagram of the Subroutine UPDAT2
and Its Subroutines

3. THE DATA FILES

The Safety System has two main data files. In the DBASE III software these files are known as FILE1 and FILE2. These names correspond to the names given in Section 1, respectively. Some of the variables, in these files, have lookup tables, which are themselves data files. There are a total of seven of these data files named TABLE1, TABLE2, TABLE3, TABLE4, TABLE5, TABLE6 and TABLE7. Some of the variables are used as indices for the data files. There are a total of five indices used for the main data files and seven indices used for the lookup tables.

Appendix B.1 contains a table which lists the variable names, data types, lookup tables, and indices for each of the main files. Appendix B.2 contains a table which lists the variable names, data types, and indices for each of the lookup tables.

4. THE MAIN FUNCTIONS

Each of the three main functions breaks down into one or more sub-functions. This section will supply more details on the subroutines used for each sub-function.

4.1 The Accident Report Generation Function

This function is broken down into seven sub-functions. Each sub-function generates a report.

4.1.1 ACCID1

ACCID1 will generate a report which summarizes the accidents for a given month. The subroutine uses the data files FILE2, TABLE6, and TABLE7. The subroutine also uses a temporary data file named ACCFIL1, with an index called RINDEX1, to calculate the statistics desired. Table 1 of Appendix B.3 lists the variable names and data types for ACCFIL1.

4.1.2 ACCID2

ACCID2 will generate a report which is a weekly summary of M.A.'s and LTI's. The subroutine uses the data files FILE1, FILE2, and TABLE6.

4.1.3 ACCID3

ACCID3 will generate a report which lists the outstanding lost time injuries. The subroutine uses the data files FILE1, FILE2, and TABLE6.

4.1.4 ACCID4

ACCID4 will generate a report which is a summary of the M.A.'s and TI's to date. The subroutine uses the data files FILE1, FILE2, and TABLE6. The subroutine also uses a temporary data file named ACCFIL6, with an index called RINDEX6, to calculate the statistics desired. Table 2 of Appendix B.3 lists the variable names and data types for ACCFIL6.

4.1.5 ACCID5

ACCID5 will generate a report which is a summary of the accidents by category. The subroutine uses the data files FILE2, TABLE5, TABLE6, and TABLE7. The subroutine also uses a temporary data file named ACCFIL2, with an index called RINDEX2, to calculate the statistics desired. Table 3 of Appendix B.3 lists the variable names and data types for ACCFIL2.

4.1.6 ACCID6

ACCID6 will generate a report which is called a K.R.A. report. The subroutine uses the data files FILE2, TABLE6, and TABLE7. The subroutine also uses a temporary data file named ACCFIL3, and a permanent data file named TARGET1. ACCFIL3 has an index called RINDEX3, and is used to calculate the statistics desired. TARGET1 has an index called TARIND1, and stores the target values used in the report. Table 4 of Appendix B.3 lists the variable names and data types for ACCFIL3, and Table 5 lists the names and types for TARGET1. ACCID6 has two subroutines, which are called ACCID6A, and ACCID6B.

4.1.7 ACCID7

ACCID7 will generate a report which contains monthly statistics for the accidents. The subroutine uses the data files FILE1, FILE2, TABLE6, and TABLE7. The subroutine also uses a temporary data file named ACCFIL4, and a permanent data file named TARGET2. ACCFIL4 has an index called RINDEX4, and is used to calculate the statistics desired. TARGET2 has an index

called TARIND2, and stores the target values used in this report. Table 6 of Appendix B.3 lists the variable names and data types for ACCFIL4. Table 7 of Appendix B.3 lists the variable names and data types for TARGET2.

ACCID7 has one subroutine, which is called ACCID7A.

4.2 The Medical Report Generation Function

This function has one sub-function, which generates a report.

4.2.1 MEDIC1

MEDIC1 will generate a report which lists for one employee a medical history. The subroutine uses the data file FILE1.

4.3 The Update Data Function

This function is broken down into two sub-functions. Each sub-function updates one of the main data files.

4.3.1 UPDAT1

UPDAT1 updates the General Employee Information file. This subroutine calls one of the three subroutines DEL1, ADD1, and MOD1.

DEL1

DEL1 will delete one employee from FILE1.

ADD1

ADD1 will add one employee to FILE1. The subroutine will call fire subroutines named FORM1A, FORM1B, FORM1C, FORM1F, and FORM1G.

MOD1

MOD1 will modify one employee in FILE1. The subroutine will call five subroutines named FORM1D, FORM1E, FORM1C, FORM1H, and FORM1I.

4.3.2 UPDAT2

UPDAT2 updates the Accident Information file. This subroutine calls one of the three subroutines DEL2, ADD2, and MOD2.

DEL2

DEL2 will delete one accident from FILE2. The subroutine will call me subroutine named FORM2H.

ADD2

ADD2 will add one accident to FILE2. The subroutine will call eight subroutines named FORM2A, FORM2B, FORM2C, FORM2D, FORM2E, FORM2F, FORM2G, and FORM2I.

MOD2

MOD2 will modify one accident in FILE2. The subroutine will call eight subroutines named FORM2J, FORM2K, FORM2L, FORM2N, FORM2E, FORM2F, FORM2G, FORM2M.

APPENDIX B.1

Tables for Main Files

Table 1

A DESCRIPTION OF FILE1

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Lookup Table	Index
1	LASTNAME	Character	18			INDEX1
2	FIRSTNAME	Character	1Ø			INDEX1
3	EMPNMBR	Numeric	6	Ø		
4	SIN	Numeric	9	Ø		INDEX2
5	OCCPTNCD	Numeric	6	Ø	TABLE 1	
6	ARW	Logical	1			
7	DISN	Numeric	6	Ø		
8	WGR	Numeric	2	Ø		
9	PAYROLL	Numeric	4	Ø		
10	D_L_BW	Date				
11	D_L_MED	Date				
12	D_L_NMED	Date				
13	BADGE	Numeric	4	Ø		
14	HIREDATE	Date				
15	STREET	Character				
16	STOVRFLW	Character	24			
17	TOWN	Character	14			
18	PROVINCE	Character	1Ø			
19	POST_CO	Character	7			
20	SEX	Character	1			
21	MARITAL	Character	1			
22	CLASS	Numeric	2	Ø		
23	HPHONE	Character	12			
24	BIRTH	Date				
25	PEA	Numeric	1Ø	2		
26	PCC	Numeric	2			
27	ECD	Date				
28	RETAIN	Logical	1			

Table 2

A DESCRIPTION OF FILE2

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Lookup Table	Index
1	SIN	Numeric	9	Ø		INDEX8
2	D_ACCIDENT	Date				
3	T_ACCIDENT	Numeric	5	2		
4	D_ACCI_REP	Date				
5	T_ACCI_REP	Numeric	5	2		
6	LOCATION	Character	2Ø			
7	CLASS_INJ	Character	1			
8	D_L_WORK	Date				
9	T_LWORK	Numeric	5	2		
10	D_R_WORK	Date				
11	T_R_WORK	Numeric	5	2		
12	D_S_WCB	Date				
13	INJURY	Numeric	2	Ø	TABLE2	
14	BODY_PART	Numeric	2	Ø	TABLE3	
15	F_A	Logical	1			
16	M_A	Logical	1			
17	LTI	Logical	1			
18	FATALITY	Logical	1			
19	ENERGY	Numeric	2	Ø	TABLE4	
20	SUB_ENERGY	Numeric	2	Ø	TABLE5	
21	GROUP	Numeric	2	Ø	TABLE6	INDEX7
22	SUB_GROUP	Numeric	2	Ø	TABLE7	
23	SUPER_L	Character	18			
24	SUPER_F	Character	1Ø			
25	S_SUPER_L	Character	18			
26	S_SUPER_F	Character	1Ø			
27	ACCIDENT_N	Numeric	6	Ø		INDEX3
28	D_F_A	Date				
29	T_F_A	Numeric	5	2		
30	D_M_A	Date				
31	T_M_A	Numeric	5	2		
32	TEXT1	Character	4Ø			
33	TEXT2	Character	4Ø			
34	TEXT3	Character	4Ø			
35	TEXT4	Character	4Ø			
36	TEXT5	Character	4Ø			
37	PHY_L	Character	18			
38	PHY_F	Character	1Ø			
39	WIT_L	Character	18			
4Ø	WIT_F	Character	1Ø			

APPENDIX B.2

Tables for Lookup Tables

Table 1

A DESCRIPTION OF TABLE1

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	OCCUPATION	Numeric	6	Ø	TINDEX1
2	OCCU_DES	Character	3Ø		

Table 2

A DESCRIPTION OF TABLE2

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	INJURY	Numeric	2	Ø	TINDEX2
2	INJ_DES	Character	3Ø		

Table 3

A DESCRIPTION OF TABLE3

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	BODY_PART	Numeric	2	Ø	TINDEX3
2	BODY_DES	Character	3Ø		

Table 4

A DESCRIPTION OF TABLE4

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	ENERGY	Numeric	2	Ø	TINDEX4
2	ENER_DES	Character	3Ø		
3	STA_PTR	Numeric	2	Ø	
4	STA_PTR	Numeric	2	Ø	

Table 5

A DESCRIPTION OF TABLE5

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	SUB_ENERGY	Numeric	2	Ø	TINDEX5
2	SUB_DES	Character	3Ø		

Table 6

A DESCRIPTION OF TABLE6

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	GROUP	Numeric	2	Ø	TINDEX6
2	GRP_DES	Character	3Ø		
3	STA_PTR	Numeric	2	Ø	
4	STO_PTR	Numeric	2	Ø	

Table 7

A DESCRIPTION OF TABLE7

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	SUB_GROUP	Numeric	2	Ø	TINDEX7
2	SUB_DES	Character	3Ø		
3	SHORT_DES	Character	8		

APPENDIX B.3

Tables for Special Files

Table 1

A DESCRIPTION OF ACCFIL1

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	GROUP_DES	Character	3Ø		
2	SUB_DES	Character	3Ø		
3	NFA	Numeric	3	Ø	
4	NMA	Numeric	3	Ø	
5	NLTIA	Numeric	3	Ø	
6	NLTI	Numeric	3	Ø	
7	SUB_GROUP	Numeric	2	Ø	RINDEX1

Table 2

A DESCRIPTION OF ACCFIL6

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	D_ACCIDENT	Date			
2	D_L_WORK	Date			
3	D_R_WORK	Date			
4	FIRSTNAME	Character	1Ø		
5	LASTNAME	Character	2Ø		
6	DESCRIPT	Character	4		RINDEX6

Table 3

A DESCRIPTION OF ACCFIL2

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	SUB_ENERGY	Numeric	2	Ø	RINDEX2
2	SUB_DES	Character	3Ø	Ø	
3	FA1	Numeric	2	Ø	
4	MA1	Numeric	2	Ø	
5	LTI1	Numeric	2	Ø	
6	FA2	Numeric	2	Ø	
7	MA2	Numeric	2	Ø	
8	LTI2	Numeric	2	Ø	
45	FA15	Numeric	2	Ø	
46	MA15	Numeric	2	Ø	
47	LTI15	Numeric	2	Ø	
48	FA16	Numeric	2	Ø	
49	MA16	Numeric	2	Ø	
50	LTI16	Numeric	2	Ø	

Table 4

A DESCRIPTION OF ACCFIL3

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	SUB_GROUP	Numeric	2	Ø	RINDEX3
2	SUB_DES	Character	8		
3	FATLR	Numeric	15	Ø	
4	FATTR	Numeric	15	Ø	
5	FATTA	Numeric	15	Ø	
6	FALR	Numeric	15	2	
7	FATR	Numeric	15	2	
8	FATA	Numeric	15	2	
9	SALLLR	Numeric	15	2	
10	SALLTR	Numeric	15	2	
11	SALLTA	Numeric	15	2	
12	FALLLR	Numeric	15	2	
13	FALLTR	Numeric	15	2	
14	FALLTA	Numeric	15	2	
15	NMHRS	Numeric	1Ø	Ø	

Table 5

A DESCRIPTION OF TARGET1

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	SUB_GROUP	Numeric	2	Ø	TARIND1
2	SUB_DES	Character	3Ø		
3	FATAL	Numeric	5	Ø	
4	SLTIA	Numeric	1Ø	2	
5	FLTIA	Numeric	1Ø	2	
6	SLTI	Numeric	1Ø	2	
7	FLTI	Numeric	1Ø	2	

Table 6

A DESCRIPTION OF ACCFIL4

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	SUB_GROUP	Numeric	2	Ø	RINDEX4
2	SUB_DES	Character	3Ø		
3	MATR	Numeric	15	Ø	
4	LTIATR	Numeric	15	2	
5	LTITR	Numeric	15	2	
6	FATR	Numeric	15	2	
7	FATA	Numeric	15	2	
8	SATR	Numeric	15	2	
9	SATA	Numeric	15	2	
10	FALLTR	Numeric	15	2	
11	FALLTA	Numeric	15	2	
12	SALLTR	Numeric	15	2	
13	SALLTA	Numeric	15	2	
14	NMHRS	Numeric	15	Ø	

Table 7

A DESCRIPTION OF TARGET2

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	GROUP	Numeric	2	Ø	TARIND2
2	TRFA	Numeric	15	2	
3	TRSA	Numeric	15	2	
4	TRF	Numeric	15	2	
5	TRS	Numeric	15	2	
6	STFA	Numeric	15	2	
7	STSA	Numeric	15	2	
8	STF	Numeric	15	2	
9	STS	Numeric	15	2	
10	TOFA	Numeric	15	2	
11	TOSA	Numeric	15	2	
12	TOF	Numeric	15	2	
13	TOS	Numeric	15	2	
14	COFA	Numeric	15	2	
15	COSA	Numeric	15	2	
16	COF	Numeric	15	2	
17	COS	Numeric	15	2	

Table 8

A DESCRIPTION OF ACCFIL5

No	Variable Name	Variable Type	Variable Length	No of Decimal Places	Index
1	FNAME	Character	1Ø		
2	LNAME	Character	18		
3	NMHRS	Numeric	1Ø	Ø	
4	NMA	Numeric	2	Ø	
5	NLTI	Numeric	2	Ø	
6	NLDAYS	Numeric	3	Ø	

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